



## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/DE2004/000448

Box No. I

Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-13 \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* 1-13 \_\_\_\_\_ received by this Authority on 24.09.2004 with the letter of 22.09.2004
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the drawings:
- sheets 1/10-10/10 \_\_\_\_\_ as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-13	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-13	NO
Industrial applicability (IA)	Claims	1-13	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
1. This report makes reference to the following document:			
D1: US-A-6 049 743 (BABA MASAMI), 11 April 2000 (2000-04-11)			
2. The application does not meet the requirements of PCT Article 6 because claim 1 is unclear.			
2.1 The expression <b>degree of preparation (4)</b> in claim 1 is not supported by the description. In this report, it is considered that the expression preparation edge (4) is meant.			
2.2 The expression in parentheses ( <b>disclosure in the entire embodiment</b> ) causes a lack of clarity. In this report, this expression is considered as having been deleted.			
3. The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 1 does not involve an inventive step (PCT Article 33(3)).			

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

Document D1 is considered to constitute the prior art closest to the subject matter of claim 1 and discloses (the references in parentheses are to that document):

a device for selecting a region of a tooth restoration body represented in a 3D configuration, at least parts of the region boundaries being designed as tooth-specific lines (see column 4, lines 51-61; and figures 4A and 4B).

The subject matter of claim 1 therefore differs from the known device in that each tooth-specific line and/or the preparation edge (4) is subdivided into four parts which represent the mesial-lingual, mesial-buccal, distal-lingual and distal-buccal corners of the tooth.

The present invention can therefore be considered to address the problem of providing an alternative device for selecting a region of a tooth restoration body represented in a 3D configuration.

The solution proposed in claim 1 of the present application cannot be considered inventive (PCT Article 33(3)) for the following reasons:

Document D1 discloses a device in which a 3D configuration of a restoration body is subdivided

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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into various deformable regions P(n) and A(n) defined by tooth-specific lines (11, 12, 13, 18 and ML) (see column 7, line 47 - column 8, line 33; and figures 4A-6C). The subdivision of each tooth-specific line into four parts which represent the mesial-lingual, mesial-buccal, distal-lingual and distal-buccal corners of the tooth is considered to be a minor modification of the device known from D1 which lies within the scope of what a person skilled in the art routinely does, on the basis of familiar considerations, especially since the advantages achieved thereby are easily foreseeable. Consequently, the subject matter of claim 1 also fails to involve an inventive step.

4. Dependent claims 2-13 do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT inventive step requirements.

- 4.1 In document D1, the regions are defined by the selection of tooth-specific lines (**claim 2**) (see column 4, lines 51-61).

In the device described in document D1, the marginal ridge, groove and cuspid apexes are used as tooth-specific lines (**claim 3**) (see column 4, lines 29-35).

Document D1 discloses a device which makes it possible to select the region of a dental cuspid

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	<p>up to the cuspid boundaries by selecting a tooth-specific point for the position of the cuspid apex (<b>claim 6</b>) (see figure 5).</p> <p>Moreover, document D1 discloses a distinguishable representation of the selected region (<b>claim 9</b>) (see column 8, lines 23-33, and figures 6A-6C), evaluation and comparison means for geometric data (<b>claim 10</b>) (see column 4, lines 1-5) and a CAD system construction tool (<b>claim 11</b>) (see column 9, lines 41-56).</p> <p>4.2 Dependent <b>claims 4, 5, 7, 8, 12 and 13</b> relate to minor modifications of the device as per claim 1 which lie within the scope of what a person skilled in the art routinely does, on the basis of familiar considerations, especially since the advantages achieved thereby are easily foreseeable. Consequently, the subject matter of <b>claims 4, 5, 7, 8, 12 and 13</b> also fails to involve an inventive step.</p>